

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Rule 71.1)

To:

MTU Aero Engines GmbH
Intellectual Property Management
(ASI)
Postfach 50 06 40
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Date of mailing
(day/month/year) 03/24/2006

Applicant's or agent's file reference

P802703/WO/1

IMPORTANT NOTIFICATION

International application No.

PCT/DE2004/002368

International filing date (day/month/year)

10/23/2004

Priority date (day/month/year)

11/06/2003

Applicant

MTU AERO ENGINES GMBH et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary report on patentability and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the *PCT Applicant's Guide*.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed invention is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the IPEA/

Authorized officer

Koenigsdorfer, P

Facsimile No.

Telephone No.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P802703/WO/1	<div style="display: flex; justify-content: space-between;"> <div>FOR FURTHER ACTION</div> <div>See Form PCT/IPEA/416</div> </div>	
International application No. PCT/DE2004/002368	International filing date (day/month/year) 10/23/2004	Priority date (day/month/year) 11/06/2003
International Patent Classification (IPC) or national classification and IPC INV.B23K26/38 B23K26/03		
Applicant MTU AERO ENGINES GMBH et al.		

1.	This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2.	This REPORT consists of a total of _____ sheets, including this cover sheet.
3.	<p>This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>5</u> sheets, as follows:</p> <div style="margin-left: 20px;"> <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. </div> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>

4.	<p>This report contains indications relating to the following items:</p> <div style="margin-left: 20px;"> <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application </div>
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Date of submission of the demand 04/23/2005	Date of completion of this report 03/24/2006
Name and mailing address of the IPEA/ Facsimile No.	Authorized officer Caubert, J-S Telephone No.

Form PCT/IPEA/409 (cover sheet) (January 2004)

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☐ the description:

pages 1-6 _____ as originally filed/furnished

pages * _____ received by this Authority on _____

pages * _____ received by this Authority on _____

☐ the claims:

pages _____ as originally filed/furnished

pages * _____ as amended (together with any statement) under Article 19

pages * 1-5 by letter dated 05/04/2005 received by this Authority on 08/06/2005

pages * _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages * _____ received by this Authority on _____

pages * _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/DE2004/002368

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	<u>1-5</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-5</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-5</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

cf. Supplementary Page

INTERNATIONAL PRELIMINARY EXAMINATION REPORT
SUPPLEMENTARY PAGE Int. File No. PCT/DE2004/002368

Re Point V

Reasoned determination regarding the novelty, inventive activity and commercial applicability; documents and statements in support of this determination

1. In the present Action, reference is made to the following documents:

D1: EP 0 937 532 A (M J TECHNOLOGIES LIMITED) August 25, 1999 (1999-08-25)

D2: WO 86/02301 A (ADVANCED LASER SYSTEMS, INC) April 24, 1986 (1986/04/24)

2. Document D1 is considered the most proximate related art with respect to the subject matter of Claim 1. It discloses (the references in parenthesis relate to this document):

A method for checking a bore hole which is introduced in a workpiece (4) with the aid of laser pulsing, characteristic signals from the region of the bore hole being received with the aid of a sensor (1) and compared with setpoint values (column 3, lines 34, 35), and only signals are taken into account which are received following a characteristic time interval following a laser pulse.

The subject matter of Claim 1 thus differs from the known method in that the characteristic time interval is defined as a function of material characteristics of the workpiece and of process parameters of the laser pulse, in such a way that the time interval begins, at the earliest, as soon as

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at least a thin skin of the bore hole wall, melted by a preceding laser pulse, has solidified again and the time interval ends, at the latest, as soon as a new laser pulse occurs.

The objective to be achieved by the present invention could thus be seen in making the monitoring more precise.

The approach proposed in Claim 1 of the present application may be considered inventive for the following reasons (Article 33(3) PCT):

The aforementioned features cannot be gathered from the related art. Furthermore, no mention is made to analyze signals from the region of the bore hole during the course of production, i.e., practically from pulse to pulse.

3. The Claims 2 - 6 do not include any features that, in combination with the features of any claim to which they refer, satisfy the PCT requirements with respect to novelty or inventive activity.